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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/523,844

02/07/2005

/ Takashi Kanno

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4247

7590

06/12/2006

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EXAMINER

ESTRADA, MICHELLE

ART UNIT

PAPER NUMBER

2823

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/523,844

Applicant(s)

KANNO ET AL.

Examiner

Michelle Estrada

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 March 2006.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-8 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 3/20/06.

- 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The IDS filed 3/20/06 has been considered by the Examiner.

### ***Double Patenting***

Applicant is advised that should claim 7 be found allowable, claim 8 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Engdahl et al. (2001/0039168).

Re claim 1, Engdahl et al. disclose at least three rollers rotatably provided about axes arranged at parallel intervals wherein each of the at least three rollers has a cylindrical surface which contacts a circumferential surface of a disk-shaped wafer; a rotation drive mechanism that rotates and drives at least one of the rollers; an interval adjustment mechanism capable of adjusting dimensions of the intervals of the rollers; an interval adjustment mechanism capable of adjusting dimensions of the interval rollers; a load control device that controls a load applied from the rollers to the wafer in a radial direction of the wafer when the wafer is clamped between the rollers (See fig. 2); wherein the wafer rotating device supports and rotates the wafer by a frictional force proportional to a contact load between the cylindrical surfaces of the rollers and the circumferential surface of the wafer (See paragraph [0108]).

Re claim 2, Engdahl et al. disclose a load cell is provided in the interval adjustment mechanism that detects the load applied to the rollers along a direction of movement of the rollers, wherein the load control device controls the interval adjustment mechanism so that the load detected by the load cell is maintained constant.

Re claim 3, Engdahl et al. disclose the rollers rotatably provided around the axes which are arranged roughly in a vertical direction, and the rollers include a flange section; wherein the flange section a diameter larger than the cylindrical surface of the rollers, and the flange section provided below the cylindrical surface which clamps the wafer, and the flange section has an inclined surface in which an upper surface of the flange section gradually becomes lower moving towards an outside in a radial direction.

Re claim 4, Engdahl et al. disclose wherein an angle between two of the rollers adjacent to one of the rollers and on both sides of the one of the rollers is smaller than  $180^\circ$ .

Re claim 5, Engdahl et al. disclose wherein pairs of rollers are arranged at three or more locations at intervals in a circumferential direction of the wafer.

Re claim 6, Engdahl et al. disclose a wafer rotating device including at least three rollers rotatably provided about axes arranged at parallel intervals, wherein each of the rollers has a cylindrical surface which contacts a circumferential surface of a disk-shaped wafer; a rotation drive mechanism that rotates and drives at least one of the rollers; an interval adjustment mechanism capable of adjusting dimensions of the intervals of the rollers; an interval adjustment mechanism capable of adjusting dimensions of the interval rollers; a load control device that controls a load applied from the rollers to the wafer in a radial direction of the wafer when the wafer is clamped between the rollers, wherein the wafer rotating device supports and rotates the wafer by a frictional force proportional to a contact load between the cylindrical surfaces of the rollers and the circumferential surface of the wafer; a light source that radiates light onto the circumferential surface of a wafer supported by the wafer rotating device; and a light detector that detects light that has been radiated from the light source which is reflected on the circumferential surface of the wafer (See fig. 2).

Re claims 7 and 8, Engdahl et al. disclose wherein the wafer includes a top surface and a bottom surface, and the wafer is rotated without any contact on the top surface and the bottom surface.

### ***Response to Arguments***

Applicant's arguments filed 3/20/06 have been fully considered but they are not persuasive. Applicant argues that Engdahl et al. do not disclose wherein the wafer rotating device supports and rotates the wafer by a frictional force proportional to a contact load between the cylindrical surfaces of the rollers and the circumferential surface of the wafer. However, at paragraph [0108] Engdahl et al. disclose wherein the index table rotates the wafer and the head assembly is connected to the spindle. It is inherent that a frictional force exists between the wafer and the rollers, therefore a frictional force proportional to a contact load between the cylindrical surfaces of the rollers and the circumferential surface of the wafer will occur.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Estrada whose telephone number is 571-272-1858. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2800.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michelle Estrada  
Primary Examiner  
Art Unit 2823

ME  
June 5, 2006